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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/624,661
Filing Date: July 22, 2003
Appellant(s): SHELLANS, MARK HONORE

Dale B. Halling
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06 March 2006 appealing from the Office action mailed 29 November 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US Patent	Name	Date
6,084,530	Pidwerbetsky et al (Pidwerbetsky)	07-200
6,396,438	Seal	05-2002
6,563,417	Shaw	05-2003
6,025,784	Mish	02-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 8-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Pidwerbetsky.

Regarding claim 8, Pidwerbetsky et al. (6,084,530) teaches a tagging and tracking system, comprising:

a plurality of modulating tags (col. 4, lines 9-13, information signal 306 to modulate sub-carrier frequency) each attached to one of a plurality of mobile units;

a plurality of electromagnetic transmitters positioned in a plurality of key locations (Fig. 1, col. 2, lines 1-10, interrogators associated with toll collection system);

a plurality of receivers (col. 2, lines 34-41, interrogators determine tag id and speed of the vehicle), one of the plurality of receivers receiving a reflected signal (col. 2, lines 34-41, interrogators determine tag id and speed of the vehicle via reflected signal or backscatter) from one of the plurality of modulating tags; and

a database (col. 2, lines 7-10, identification of tags in security access application represents database for comparison of tag ID; security access represents tracking of certain RFID tag) coupled to the plurality of receivers comparing (col. 2, lines 34-41, interrogators determine tag id and speed of the vehicle via reflected signal or backscatter) the reflected signal to a predetermined signal.

Regarding claim 9, Pidwerbetsky teaches the system of claim 8, wherein the reflected signal is a phase modulated signal (col. 4, lines 28-32, BPSK, MSK).

Regarding claim 10, Pidwerbetsky teaches 10. The system of claim 8, wherein the reflected signal defines a unique identifier (col. 3, lines 22-30, identity of tag represents unique identifier of the tag) for one of the plurality of modulating tags.

Regarding claim 12, Pidwerbetsky teaches the system of claim 8, wherein the plurality of mobile units are motor

vehicles (col. 2, lines 1-10, vehicles).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-7 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pidwerbetsky et al. (6,084,530) in view of Seal (6,396,438).

Regarding claim 1, Pidwerbetsky teaches a tagging and tracking system, comprising:

an electromagnetic transmitter having an output (Fig. 2, transmitter antenna 204);

a modulating tag (col. 4, lines 9-13, information signal 306 to modulate sub-carrier frequency) embedding an information signal on a reflection (col. 3, lines 22-30, modulated backscatter (MBS)) of the output from the electromagnetic transmitter;

a receiver (Fig.2, receiver via antenna 106) for receiving the reflection having the information signal, the receiver having a received output; and

a processor (Fig.2, processor 200) coupled to the received output for decoding the information signal.

But Pidwerbetsky does not teach the modulating tag includes a tamper proof system.

However, Seal teaches, in the art of transponder system, the modulating tag includes a tamper proof system (Fig. 14, col. 10, lines 51-56, tamper detector 1410) for the purpose of providing higher level of security.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the modulating tag includes a tamper proof system in the device of Pidwerbetsky because Pidwerbetsky suggests identification detector receiving the reflected component and Seal teaches the modulating tag includes a tamper proof system for the purpose of providing higher level of security.

Regarding claim 2, Pidwerbetsky teaches the system of claim 1, further including a database (col. 2, lines 1-10, data retrieved from tag suggests database in the network 102) coupled to the processor.

Regarding claim 3, Pidwerbetsky teaches the system of claim 1, wherein the information signal is a periodic signal (col. 4, lines 28-32, information signal of BPSK, QPSK suggest periodic signal).

Regarding claim 4, Pidwerbetsky teaches the system of claim 1, wherein the information signal is modulated at a frequency higher than a probable Doppler shift (col. 7, lines 31 -46, RF carrier and f-s are larger than Doppler shift del-f).

Regarding claim 5, Pidwerbetsky teaches the system of claim 4, wherein the information signal is a modulated signal.

But Pidwerbetsky does not teach the information signal is a polarization modulated signal.

However, Seal teaches, in the art of transponder system, the information signal (col. 1, lines 28-62, ID tagging associated with RFID suggests id signal or information signal) is a polarization modulated signal (col. 14, lines 26-34, modulation response with different polarization) for the purpose of providing tag location.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the modulating tag includes the information signal is a polarization modulated signal in the device of Pidwerbetsky because Pidwerbetsky suggests the information signal is a modulated signal and Seal teaches the information signal is a polarization modulated signal for the purpose of providing tag location.

Regarding claim 6, Pidwerbetsky teaches the system of claim 1, wherein the modulating tag has a battery for power (Fig. 3, battery 310).

Regarding claim 7, Pidwerbetsky teaches the system of claim 6, wherein the modulating tag includes an integrated circuit (col. 4, lines 28-32, PSK, BPSK and QPSK suggest multiple logic

switches forming information signal) that drives a plurality of switches that create the information signal.

Regarding claim 15, Pidwerbetsky teaches a tagging and tracking system, comprising:

a plurality of modulating tags (Figs. 1 and 4; col. 2, lines 1-10, speeding vehicle including RFID tag for identification speed measurement) attached to a plurality of mobile units, each of the plurality of tags capable of modulating a polarization of a received signal;

an electromagnetic transmitter having an output capable of being pointed (Fig. 4, col. 5, lines 17-30, pointed transmitter associated with police Doppler radar interrogator) at one of the plurality of modulating tags;

an electromagnetic receiver receiving a reflected signal (Fig. 4, col. 5, lines 17-30, reflected signal associated with police Doppler radar interrogator) from one of the plurality of modulating tags; and

a processor uniquely (col. 3, lines 22-30, identity of tag implies unique identifier of the tag) identifying the one of the plurality of modulating tags.

But Pidwerbetsky does not teach the information signal is modulating a polarization of a received signal.

However, Seal teaches, in the art of transponder system,

the information signal (col. 1, lines 28-62, ID tagging associated with RFID suggests id signal or information signal) is a polarization modulated signal (col. 14, lines 26-34, modulation of polarized signal X ,Y or Z direction from interrogator 402) for the purpose of providing tag location.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the information signal is a polarization modulated signal in the device of Pidwerbetsky because Pidwerbetsky suggests the information signal is a modulated signal and Seal teaches the information signal is a polarization modulated signal for the purpose of providing tag location.

Regarding claim 16, Pidwerbetsky teaches the system of claim 15, further including a database (col. 2, lines 7-10, identification of tags in security access application implies database for comparison of tag id; security access implies tracking of certain RFID tags) coupled to the processor, wherein the database contains an information associated with the one of the plurality of modulating tags.

Regarding claim 17, Pidwerbetsky teaches the system of claim 15, wherein one of the plurality of modulating tags has been a reflected signal (Fig. 4, col. 5, lines 17- 30, reflected signal associated with police Doppler radar interrogator).

But Pidwerbetsky does not teach one of the plurality of modulating tags has been tampered with and reflects a tampered signal.

However, Seal teaches, in the art of transponder system, one of the plurality of modulating tags has been tampered with and reflects a tampered signal (Fig. 14, col. 10, lines 42-60, tamper detector 1410 suggests activation of reflected signal) for the purpose of providing higher level of security.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include one of the plurality of modulating tags has been tampered with and reflects a tampered signal in the device of Pidwerbetsky because Pidwerbetsky suggests one of the plurality of modulating tags has been a reflected signal and Seal teaches one of the plurality of modulating tags has been tampered with and reflects a tampered signal for the purpose of providing higher level of security.

Regarding claim 18, Pidwerbetsky teaches the system of claim 1 5, wherein each of the plurality of modulating tags has identification system.

But Pidwerbetsky does not teach a tamper proof system.

However, Seal teaches, in the art of transponder system, a tamper proof system (Fig. 14, col. 10, lines 42-60, tamper

detector 1410 suggests activation of reflected signal) for the purpose of providing higher level of security.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a tamper proof system in the device of Pidwerbetsky because Pidwerbetsky suggests identification system and Seal teaches a tamper proof system (Fig. 14, col. 10, lines 42-60, tamper detector 1410 suggests activation of reflected signal) for the purpose of providing higher level of security.

Regarding claim 19, Pidwerbetsky teaches the system of claim 18, wherein the information signal is a periodic signal (col. 4, lines 28-32, information signal of BPSK, QPSK suggest periodic signal).

Regarding claim 20, Pidwerbetsky teaches the system of claim 19, wherein the information signal has a frequency that is higher than a probable Doppler shift (col. 7, lines 31 -46, RF carrier and f-s are larger than Doppler shift del-f).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pidwerbetsky et al. (6,084,530) in view of Shaw (6,563,41 7).

Regarding claim 11, Pidwerbetsky teaches the system of claim 10, wherein the database contains the unique identifier.

But Pidwerbetsky does not teach an associated group of

information related to the unique identifier.

However, Shaw teaches, in the art of transponder system, an associated group of information related to the unique identifier for the purpose of providing additional search option.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include an associated group of information related to the unique identifier in the device of Pidwerbetsky because Pidwerbetsky suggests the unique identifier and Shaw teaches an associated group of information related to the unique identifier for the purpose of providing additional search option.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pidwerbetsky et al. (6,084,530) in view of Mish (6,025,784).

Regarding claim 13, Pidwerbetsky teaches the system of claim 12, wherein the plurality of modulating tags are id tag of vehicle.

But Pidwerbetsky does not teach the plurality of modulating tags are each a license tag.

However, Mish teaches, in the art of transponder system, the plurality of modulating tags are each a license tag (col. 3, lines 8-40, RFID tag on the license plate) for the purpose of

providing vehicle identification.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the plurality of modulating tags are each a license tag in the device of Pidwerbetsky because Pidwerbetsky suggests the unique identifier and Mish teaches the plurality of modulating tags are each a license tag for the purpose of providing vehicle identification.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pidwerbetsky in view of Mish as applied to claim 13 above, and further in view of Shaw.

Regarding claim 14, Pidwerbetsky teaches the system of claim 13, wherein the plurality of key locations are associated with interrogators in electronic toll collection system (col. 2, lines 3-7).

But Pidwerbetsky in view of Mish does not teach the plurality of key locations are traffic choke points in a city.

However, Shaw teaches, in the art of transponder system, the plurality of key locations are traffic choke points in a city (Fig. 3, col. 5, lines 55-59, interrogators associated with distribution path implies interrogator providing traffic choke-point control wherein distribution path of warehouses are suggested in a large city) for the purpose of providing

inventory flow control.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the plurality of key locations are traffic choke points in a city in the device of Pidwerbetsky in view of Mish because Pidwerbetsky in view of Mish suggests the plurality of key locations are associated with interrogators in electronic toll collection system and Mish teaches the plurality of key locations are traffic choke points in a city for the purpose of providing inventory flow control.

(10) Response to Argument

Appellant's arguments filed 3/6/06 have been fully considered but they are not persuasive.

Regarding claims 8-10 and 12, appellant argues that the 35 USC 102 rejection is improper because Pidwerbetsky lacks the receiver receiving a "reflected signal" from the modulating tags required by claim 8. This argument is not persuasive because Pidwerbetsky discloses a receiver receiving via receive antenna 206 a modulated reflected signal in col. 4 lines 18-37. Contrary to appellant's arguments, Pidwerbetsky clearly refers to a reflected signal in col. 4 line 36. The argument that the tag of Pidwerbetsky modulates a carrier 308 as a "new" signal rather than a reflected signal is not persuasive because

modulator 307 modulates subcarrier 308 with information signal 306 to produce subcarrier signal 311 and modulator 302 modulates the RF signal from the interrogator with the subcarrier signal to produce a modulated reflected (or backscatter) signal. The modulator 302 is switched on and off to change reflectance of antenna 301 to provide a reflected signal. Note the modulated reflected signals 603/604/702/703 in figs. 6 and 7.

The argument that in the present invention the modulating tag 16 has a plurality of conductive traces 42 that are connected by switches 44 wherein modulation of the reflected signal is achieved by changing the reflective properties of the tag 16 is not persuasive because these limitations are not recited in the rejected claims 8-10 and 12. The argument that the tag 16 of the present invention has no detector, has no clock recovery and does not receive an information signal is not persuasive because the claims do not exclude such features of Pidwerbetsky. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The rejection of dependent claims 9-10 and 12 are proper for the same reasons applied above. Regarding claim 9, phase modulation is included in col. 4 lines 28-32 of Pidwerbetsky.

Regarding claim 10, determining tag ID from the reflected signal is included in col. 2 lines 35-40 of Pidwerbetsky. The argument that claim 12 depends from an allowable claim is not persuasive for the same reasons applied above.

Regarding claims 1-7 and 15-20, appellant argues that the 35 USC 103 rejection is improper because Pidwerbetsky and Seal lack modulation of a reflected signal in claim 1. This argument is not persuasive because Pidwerbetsky discloses a modulation of a reflected signal as discussed above regarding claims 8-10 and 12. Modulator 302 modulates reflectance of the signal from the interrogator in col. 4 lines 18-34 of Pidwerbetsky. The argument that the present invention has nothing to do with RFID tags is not persuasive because claims do not exclude RFID. Further, the disclosed invention includes a "tag" that modulates an "ID" on a electromagnet waves that may be standard police radar or microwave that is radio frequency, corresponding to an RFID tag.

Regarding claim 3, the argument that Pidwerbetsky lacks periodic signal is not persuasive because the single frequency subcarrier in col. 4 line 29 and col. 10 line 20 is periodic. Further, the information would include binary bit/clock and frame periods. The explanation by appellant that the signal is periodic since the tag does not know when it will be illuminated

and would not make sense in Pidwerbetsky is not persuasive because the tags in Pidwerbetsky don't know when they will be illuminated by an interrogation signal. Note that periodic is not the same as continuous, and that the reflected signal requires an incident signal to be reflected. As in appellant's invention, Pidwerbetsky reflects incident waves in col. 4 lines 18-34. The reference to light signals in the argument is not persuasive because the claims do not require light and page 11 line 4 of appellant's specification includes microwave, corresponding to RF of Pidwerbetsky.

Regarding claim 5, the argument that Seal does not change polarization to encode information is not persuasive because the claim does not require this. The combination of Pidwerbetsky and Seal would include a interrogation signal with different polarizations (col. 14 of Seal) so that the reflection of such interrogation signal (col. 4 of Pidwerbetsky) would provide a polarization modulated signal as claimed.

Regarding claim 15, the argument that Pidwerbetsky or Seal do not show or suggest modulation of a reflected signal is not persuasive because Pidwerbetsky discloses modulation of a reflected signal in col. 4 as discussed above. Tags capable of modulating a polarization of the a received signal is suggested by Seal including (cols. 14-15) different polarization phases by

switching on/off different antennas corresponding to different polarization phases that would have been obvious in the tag of Pidwerbetsky to provide tag location and is suggested by Pidwerbetsky (col. 4) including phase modulation by switching at the tag antenna to change the reflectance of the antenna. Further, Seal discloses in cols. 15-16 that the tag measures the polarization phases to determine the tag position and returns corresponding positing information messages from the tag that would be modulated with information corresponding to the polarization. The argument that the present invention has nothing to do with RFID tags is not persuasive because claims do not exclude RFID. Further, the disclosed invention includes a "tag" that modulates an "ID" on a electromagnet waves that may be standard police radar or microwave that is radio frequency, corresponding to an RFID tag.

Regarding claim 17, the argument that Seal does not send a tamper signal is not persuasive because Seal includes a tamper signal or "tamper alert message" in col. 18 lines 33-46.

Regarding claim 19, the argument regarding periodic signal is not persuasive for the same reasons applied above to claim 3.

The argument that claims 2, 4, 6, 7, 11, 13, 14, 16, 18 and 20 depend from allowable claims is not persuasive for the same reasons applied above.

Appellant does not point out any particular deficiency in the rejection of claim 2, 4, 6, 7, 11, 12, 13, 14, 16, 18 or 20. Therefore the rejections are proper for the reasons stated above in the grounds of rejection and the response to arguments.

Appellant's invention is directed to tags reflecting electromagnetic waves modulated with ID information corresponding to the RFID tag of Pidwerbetsky with reflection modulator 302.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Edwin C. Holloway, III

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